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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,783	06/06/2005	Claus August Bolza-Schunemann	W1.2041 PCT-US	4615

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EXAMINER	
ZIMMERMAN, JOSHUA D	
ART UNIT	**PAPER NUMBER**
2854	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/537,783	BOLZA-SCHUNEMANN, CLAUS AUGUST	
	Examiner	Art Unit	
	Joshua D. Zimmerman	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *102,104-107,109-112 and 114-127* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *102,104-107,109,112 and 114-127* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/26/07 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 102, 105, 106, 110, 111, 114-116, 118, 121, and 122 are rejected under 35 U.S.C. 103(a) as being anticipated by Tsuneo (JP 01-232045) in view of Preuss et al. (US 3688694).

Regarding claim 102, Tsuneo teaches "a method for controlling rollers in a dampening agent roller train of a printing unit (abstract) including:

providing a source of a dampening agent (see the source of dampening solution which is in contact with item 2 in the figure);

providing a first roller adapted for taking up a dampening agent from said source of dampening agent (item 2);

providing a second roller contacting said first roller and receiving said dampening agent directly from said first roller (item 3);

providing a forme cylinder having a forme cylinder surface speed of rotation (item 8);

including said first and said second rollers in a roller train usable for conveying said dampening agent to said forme cylinder (see the configuration of items 2 and 3 in the figure);

providing a first drive motor for driving said first roller (item 10);

rotating said first roller at a first roller surface speed using said first drive motor (abstract: constitution);

providing a second drive motor for driving said second roller independently of said first roller (item 11);

controlling each of said first and second motors independently (abstract: constitution);

rotating said second roller at a second roller surface speed using said second drive motor (abstract: constitution)."

Tsuneo fails to specifically teach:

that the second roller is rotated at a speed greater than the first roller speed;

"providing a forme cylinder drive motor;" said motor being controlled independently of said first and second motors;

"forming a slippage between said first roller and said second roller by said controlling of each of said first and second motors independently, said slippage resulting from said difference between said first roller surface speed and said second roller surface speed which is greater than said first roller surface speed;

controlling said slippage between said first and second roller surface speeds, using said first and second drive motors as a function of said surface speed of said forme cylinder of said printing unit; and

setting an amount of said dampening agent supplied to said forme cylinder by controlling said slippage between said first and second roller surface speeds as said function of said surface speed of said forme cylinder."

Preuss et al. disclose a dampening device with a roller train with a first roller and a second roller (figure 1, abstract), and a plate cylinder driven separately from the first and second rollers (column 6, lines 2-3). Preuss et al. teach rotating the second roller at a speed higher than the first roller in order to create a slippage and to more accurately control the flow of dampening fluid (column 2, lines 10-19). Preuss et al. also teach controlling the slippage by regulating the speed differential between the first and second rollers (column 2, lines 23-26). Finally, Preuss et al. teach changing the dampening solution supply by said slippage regulation in response to the speed of said forme cylinder (column 2, lines 40-47). The method of Preuss et al. results in a greatly improved uniformity of the flow of dampening fluid (column 1, lines 63-68). Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in

the art to modify the method of Tsuneo by rotating the second roller at a speed higher than the first roller in order to create a slippage, and, further, to control the slippage, using the independent motors of Tsuneo, in accordance with an operating condition of the forme cylinder by regulating the speed differential between the first and second rollers in order to improve the uniformity of flow of dampening fluid.

Regarding claim 105, Preuss et al. further teach "further including setting both of said first roller surface speed and said second roller surface speed as a function of said forme cylinder surface speed (column 2, lines 40-47)."

Regarding claim 106, Tsuneo as modified does not specifically teach "selecting an amount of ink required for printing using said forme cylinder and setting said one of said surface speed of at least one of said first and second rollers and said slippage between said first and second rollers as a function of said amount of ink required." However, one having ordinary skill in the art would recognize that the dampening unit of Tsuneo would be used in a printing process and would further recognize that selecting an amount of ink required for printing is an inherent step in a printing process. One having ordinary skill in the art would also recognize that when more ink is required to print, the amount of dampening solution required would decrease, and thus would change "one of said surface speed of at least one of said first and second rollers and said slippage between said first and second rollers" in order to change the amount of dampening solution supplied so as not to supply more dampening solution than is necessary.

Regarding claim 110, one having ordinary skill in the art would recognize that the drive motors are capable of being "infinitely variably controlled."

Regarding claim 111, Tsuneo further teaches "further including providing said first and second drive motors being electronically controlled (10', 11')."

Regarding claim 115, Tsuneo as modified does not specifically disclose a roller surface speed. However, one having ordinary skill in the art would recognize that changing speed of the first roller results in changing the amount of dampening solution applied to the form cylinder. It has been held that it is not inventive to discover the optimum or workable ranges of a process by routine experimentation. It would have been obvious to one of ordinary skill in the art at the time of the invention, through routine experimentation, to provide "first roller surface speed at less than 2 m/s" in order to achieve an optimum amount of dampening solution on the form cylinder.

Regarding claim 116, Tsuneo further teaches "further including providing a third roller in said roller train (item 4), locating said third roller after, in a direction of travel of said dampening agent, said second roller and providing a drive between said second roller and said third roller (items 3 and 4 of Tsuneo are frictionally connected)."

Regarding claim 118, items 3 and 4 of Tsuneo are frictionally connected.

Regarding claim 121, Tsuneo further teaches "further including bringing a last roller in said roller train into contact with said forme cylinder by contacting one of a bridge roller and an ink application roller working with said forme cylinder (roller 4)."

Regarding claim 122, Tsuneo further teaches "further including providing a dampening agent reservoir as said dampening agent source and dipping said first roller into said dampening agent reservoir (see roller 2 dipped into the reservoir of the figure)."

Regarding claim 114, while neither Tsuneo nor Preuss et al. specifically teach "rotating said forme cylinder at a forme cylinder speed and selecting said first roller surface speed and said second roller surface speed both being less than said forme cylinder speed," Preuss et al. teach that all three cylinders are rotated independently, as discussed above. Preuss et al. further teach that the surface speeds of the first and second rollers are set independently of the forme cylinder in order to control the amount of dampening solution provided to the forme cylinder; for example, more is provided at startup, and less is provided at higher press speeds (column 2, lines 40-47). Inherently, in the latter example, the first and second rollers need lower speeds. Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in the art to set the surface speeds of the first and second rollers lower than the surface speed of the forme cylinder in order to provide less dampening solution to the forme cylinder when less solution is required by the printing process.

3. Claim 109 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuneo and Preuss et al. as applied to claim 102 above, and further in view of D'Heureuse et al. (US 5,101,724).

Regarding claim 109, Tsuneo and Preuss et al. teach all that is claimed, but do not specifically teach "operating said second roller as a traversing roller." D'Heureuse et al. teach using a second roller as a traversing roller because of its 'evening-out action' (column 1, lines 63-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the method of Tsuneo by making the second roller a traversing roller in order to achieve a good 'evening-out action.'

4. Claims 104, 112, 117, 119 and 120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuneo and Preuss et al. as applied to claims 102 and 116 above, further in view of applicant's admitted prior art (AAPA).

Tsuneo as modified teaches all claimed limitations except the following:

Regarding claim 104, Tsuneo as modified does not specifically teach "further including selecting an ink for use in printing by said forme cylinder, forming a mixture of said ink and said dampening agent, wherein a property of said ink includes an amount of said dampening agent mixed with it and setting said one of said surface speed of at least one of said first and second rollers and said slippage between said first and second rollers as a function of said property of said ink." However, AAPA teaches a film-type dampening unit (paragraph 6 of applicant's specification). One having ordinary skill in the art would recognize that film-type dampening units use emulsion inks, and would recognize that such systems are used because they decrease the start-up time of a printing press. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the film-type dampening system of AAPA into the

modified system of Tsuneo in order to decrease the start-up time of the printing process. Further, one having ordinary skill in the art would recognize that "selecting an ink for use in printing by said forme cylinder, forming a mixture of said ink and said dampening agent, wherein a property of said ink includes an amount of said dampening agent mixed with it" is an inherent step in a printing process using a film-type dampening unit. One having ordinary skill in the art would also recognize that when more dampening solution is present in the ink, the amount of dampening solution required would decrease, and thus would be motivated to change "one of said surface speed of at least one of said first and second rollers and said slippage between said first and second rollers as a function of said property of said ink" in order to change the amount of dampening solution supplied so as not to supply more dampening solution than is necessary.

Regarding claim 112, Tsuneo and Preuss et al. fail to specifically teach "further including providing a control console and controlling said first and second drive motors from said control console." However, AAPA teaches the use of a control console in order to control the speeds of two dampening solution rollers in order to control the slippage (paragraph 9 of applicant's specification). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the control device of AAPA in the modified system of Tsuneo in order to control the slippage between the first and second rollers.

Regarding claim 117, Tsuneo and Preuss et al. fail to teach "further including providing said drive as a gear drive." However, AAPA teaches replacing friction-

controlled rollers with a separate drive mechanism to control the speed of the rollers (paragraph 5 of applicant's specification). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the drive a gear drive in order to better control the speed of the rollers.

Regarding claim 119, Tsuneo and Preuss et al. fail to teach the use of a fourth roller positioned downstream of a roller train. However, AAPA teaches the use of a fourth roller to apply dampening solution (paragraph 6 of applicant's specification). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a fourth roller in the roller train of Tsuneo in order to distribute the dampening solution more evenly.

Regarding claim 120, Preuss et al. further teach "further including setting a slippage between at least one of said second roller and said third roller and said third roller and said fourth roller (column 2, lines 1-19)."

5. Claim 123 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuneo and Preuss et al., as applied to claim 102 above, further in view of Wolff et al. (US 6,314,878).

Regarding claim 123, Tsuneo as modified teaches all that is claimed, including the use of a dampening pan as a dampening solution supply. Tsuneo and Preuss et al. fail to teach "applying said dampening agent to said first roller as finely distributed droplets." Wolff et al. teach using a spray device is an equivalent to using a pan arrangement (column 3, lines 5-10). It would have been obvious to one of ordinary skill

in the art at the time of the invention to use a spray device to apply the agent as "finely distributed droplets" instead of using a pan because they are art-recognized equivalents.

6. Claims 107 and 124-127 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuneo and Preuss et al. as applied to claim 102 above, and further in view of Sone et al. (US 6,1338,563).

Regarding claim 107, Tsuneo and Preuss et al. teach all that is claimed except for specifically teaching two separate operating modes of the dampening unit controlled by a computer. However, Sone et al. teach the use of a dampening unit which adjusts speeds of rollers in order to compensate for the speed of the printing press so that an appropriate amount of dampening solution is applied to the press (column 5, lines 45-65). Sone et al. teach "further including providing a dampening unit having said dampening agent source and said roller train and operating said dampening unit selectively in one of a first operating state (Figure 4, the accelerating region C1 or decelerating region C2: that is, the region below speed S3) and in a second operating state (Figure 4, the normal printing regions above speed S3) wherein in said first operating state, said surface speed of said forme cylinder and said surface speed of said second roller are in a first relation with each other (column 5, lines 54-65, Figure 4) and wherein in said second operating state said surface speed of said forme cylinder and said surface speed of said second roller are in a second relation with each other (column 5, lines 54-65, Figure 4), said first relation and said second relation being

different (since the slope of the curves in each section are different, the relationship between the two roller speeds is different)." It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the control method of Sone et al. into the method of Tsuneo in order to provide an appropriate amount of dampening solution to the printing press depending upon the needs of the printing press.

Regarding claim 124, Sone et al. further teach "providing a computer and changing one of said surface speed of one of said first and said second roller and said slippage between said first and second roller using said computer (item 20, column 4, lines 45-51, and column 3, lines 53-56)."

Regarding claim 125, Sone et al. further teach "further including selecting a forme cylinder surface speed being the same in both of said first and second operating states (in both figures 4 and 5, for a given printing speed, the speeds of 2, 28 and 32 are constant; the only speed that is different is the speed of the cylinders 22 and 24).

Regarding claim 126, Tsuneo further teaches "further including selecting a first forme cylinder surface speed in said first operating state (in either the accelerating or decelerating regions specified above) and a second forme cylinder surface speed, different from said first forme cylinder surface speed in said second operating state (the normal printing region specified above)."

Regarding claim 127, Tsuneo further teaches "further including providing at least one third roller arranged in said roller train downstream, in a direction of travel of said

dampening agent and using said third roller for applying said dampening agent to said forme cylinder (roller 4)."

Response to Arguments

7. Applicant's arguments with respect to the claims have been considered but are unpersuasive.

8. Applicant's argument that Preuss et al. do not provide two separate motors for the first and second rollers is moot since Preuss et al. are relied upon for teaching controlling the supply of dampening solution by controlling slippage between the two rollers, which is controlled by varying their respective surface speeds.

9. Applicant's arguments with respect to claims 102 and 114 that Preuss et al. teach away from applicant's currently claimed invention is irrelevant because the passages cited by applicant are for a different embodiment than is relied upon in the rejections outlined above. Specifically, applicant is mixing the embodiment of Figure 4 with the other embodiments.

10. Applicant's argument with respect to claim 121 is also moot since claim 121 is dependant upon claim 102 (not 116), and therefore roller 4 meets the limitations as currently claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D. Zimmerman whose telephone number is 571-272-2749. The examiner can normally be reached on M-R 8:30A - 6:00P, Alternate Fridays 8:30A-5:00P.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua D Zimmerman
Examiner
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JUDY NGUYEN
SUPERVISORY PATENT EXAMINER